ILUKA

12 October 2010

Ms. Janine Howard
Environmental Specialist II
Department of Environmental Quality – Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060

RE: Renewal Package for VPDES Permit #VA0091456, Iluka Resources – Concord

Ms. Howard:

Attached is the Renewal Package for Iluka Resources Inc. – Concord Mine Concentrator, VPDES Permit #VA0091456.

On Page 2C1 of the instructions for EPA Form 3510-2C, it states that water quality analyses data for samples collected more than three (3) years prior to submission of the Renewal Application can not be used to show pollutants levels. However, the Renewal letter provided by DEQ states that water quality analyses data older than three (3) years may be used if it is still representative of current discharge and pollutant levels. Iluka has chosen to include data older than three (3) years in the Renewal Package because of the ongoing drought conditions in central Virginia and the lack of discharge or overflow at the Concord site for more than seven (7) months. Iluka asserts this data is still representative of the current relevant pollutant levels.

Also, in the instructions for EPA Form 3510-2C, most of the water quality analyses required should be the result of composite type samples. As stated above, the Concord site has not had a discharge or overflow since mid-February resulting in the majority of the sample analyses provided with this Renewal Package being grab type samples. In addition, the water quality samples collected and analyzed more than three (3) years ago were also grab type samples. Iluka asserts this data is still representative of the current relevant pollutant levels.

Should you have any questions or require further information, I may be reached via mobile at 804.721.9613 or via email at jack.rayburn@iluka.com.

Sincerely,

W.T. "Jack" Rayburn
Environment, Health & Safety Supervisor
Iluka Resources Inc. – US Region

Iluka Resources Inc. – VA Operations
12472 St. John Church Rd., Stony Creek, VA 23882
Phone: 434.348.4300 Fax: 434.246.3039

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: S F VA0091456 T/A D

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X	
B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X		
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X	
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	
J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: Concord Mine Concentrator

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 Rideout, Kevin, EHS Specialist	(434) 348-4316

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 12472 St. John Church Road

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 Stony Creek	VA	23882

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5 16474 Walkers Mill Road

B. COUNTY NAME: Sussex County

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 Stony Creek	VA	23882	

Piedmont Regional Office

OCT 13 2010

RECEIVED

EPA Form 3510-1 (8-90)

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
1081 (specify) Mining Services	1099 (specify) Metal ores, Not Elsewhere Classified

C. THIRD	D. FOURTH
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME: Iluka Resources Inc

B. Is the name listed in Item VIII-A also the owner? ☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box: if "Other," specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

P (specify)

D. PHONE *(area code & no.)*: A (434) 348-4300

E. STREET OR P.O. BOX: 12472 St. John Church Road

F. CITY OR TOWN: Stony Creek

G. STATE: VA

H. ZIP CODE: 23882

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
9 N VA0091456	9 P

B. UIC *(Underground Injection of Fluids)*	E. OTHER *(specify)*
9 U	9 VAR051396 (specify) General Permit for Stormwater Discharges Associated with Industrial Activity

C. RCRA *(Hazardous Wastes)*	E. OTHER *(specify)*
9 R	9 (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

Iluka Resources Inc. leases mining rights in Sussex County, VA for the pupose of mining and then gravity separation of mineral sands (titanium-beraing ilemenite and zircon.) The ore is removed from a shallow, unconsolidated ore body situated in the innermost Coastal Plain physiographic province near the Fall Zone (the geologic boundary between the Coastal Plain and Piedmont physiographic provinces) using dry mining techniques. The ore is then processed at the Concord Concentrator Plant using a variety of wet gravity separation methods to produce a mineral sand concentrate. The concentrate is then trucked to the Mineral Separation Plant (MSP) located in Stony Creek, VA for further processing.

XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
Matthew B. Blackwell		10/12/2010

COMMENTS FOR OFFICIAL USE ONLY

C

VPDES Permit Application Addendum

1. **Entity to whom the permit is to be issued:** Iluka Resources Inc.

Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. **Is this facility located within city or town boundaries?** Yes ☐ No ☒

3. **Provide the tax map parcel number for the land where the discharge is located.** 101-1

4. **For the facility to be covered by this permit, how many acres will be disturbed during the next five years due to new construction activities?** 0

5. **What is the design average effluent flow of this facility?** 2.88 MGD

For industrial facilities, provide the max. 30-day average production level, include units:
103.58 Million Gallons per Month

In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? Yes ☐ No ☒
If "Yes", please identify the other flow tiers (in MGD) or production levels:

Please consider the following questions for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?

6. **Nature of operations generating wastewater**:
Settling of fine solids from the process water which is used in the mineral extraction and separation process.

85 % of flow from domestic connections/sources

Number of private residences to be served by the treatment works: 0

15 % of flow from non-domestic connections/sources

7. **Mode of discharge**: ☐ Continuous ☐ Intermittent ☒ Seasonal
Describe frequency and duration of intermittent or seasonal discharges:
Discharge occurs during large storm and heavy rainfall events

8. **Identify the characteristics of the receiving stream at the point just above the facility's discharge point:**

___ Permanent stream, never dry
___ Intermittent stream, usually flowing, sometimes dry
X Ephemeral stream, wet-weather flow, often dry
___ Effluent-dependent stream, usually or always dry without effluent flow
___ Lake or pond at or below the discharge point
___ Other:

9. **Approval Date(s):**
O & M Manual Submitted 7/06 **Sludge/Solids Management Plan** N/A

Have there been any changes in your operations or procedures since the above approval dates? Yes ☐ No ☒

PUBLIC NOTICE BILLING INFORMATION

I hereby authorize the Department of Environmental Quality to have the cost of publishing a public notice billed to the Agent/Department shown below. The public notice will be published once a week for two consecutive weeks in The Sussex Surry Dispatch in accordance with 9 VAC 25-31-290.C.2.

Agent/Department to be billed:	Environment, Health, and Safety
Owner:	Iluka Resources Inc
Agent/Department Address:	12472 St. John Church Road
	Stony Creek, VA 23882
Agent's Telephone No.:	434.348.4316
Printed Name:	Kevin Rideout
Authorizing Agent – Signature:	William Nagle for D.K. Rideout
Date:	9/24/2010

VPDES Permit No. VA0091456
Iluka Concord Mine Concentrator

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): VA0091456

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

FORM 2C NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001	36	53	44	77	35	50	Unnamed tributary of Hardwood Creek

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
1	Process Water	2200 GPM (3,168,000 MGD)	Gravity Concentration in Settling Ponds	1-G	1-U
				4-C	

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☑ YES (*complete the following table*) ☐ NO (*go to Section III*)

1. OUTFALL NUMBER (*list*)	2. OPERATION(s) CONTRIBUTING FLOW (*list*)	3. FREQUENCY a. DAYS PER WEEK (*specify average*)	3. FREQUENCY b. MONTHS PER YEAR (*specify average*)	4. FLOW a. FLOW RATE (*in mgd*) 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE (*in mgd*) 2. MAXIMUM DAILY	4. FLOW B. TOTAL VOLUME (*specify with units*) 1. LONG TERM AVERAGE	4. FLOW B. TOTAL VOLUME (*specify with units*) 2. MAXIMUM DAILY	4. FLOW C. DURATION (*in days*)
1	Process Water	1 (52 Days/yr)	12	1.79 MGD	3.696 MGD	1.79 MGD	3.696 MGD	52

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES (*complete Item III-B*) ☑ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☐ YES (*complete Item III-C*) ☑ NO (*go to Section IV*)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	2. AFFECTED OUTFALLS (*list outfall numbers*)

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS a. NO.	2. AFFECTED OUTFALLS b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE a. REQUIRED	4. FINAL COMPLIANCE DATE b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (*or other environmental projects which may affect your discharges*) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VA0091456

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
N/A	N/A	N/A	N/A

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (*list all such pollutants below*) ☑ NO (*go to Item VI-B*)

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES (*identify the test(s) and describe their purposes below*) ☑ NO (*go to Section VIII*)

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☑ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ NO (*go to Section IX*)

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
Primary Laboratories, Inc	7423 Lee Davis Road Mechanicsville, VA 23111	804.559.9004	Both Attachment A Sample Rounds, some Quarterly TSS.
Air, Water, & Soil Laboratories, Inc	2109A North Hamilton Street Richmond, VA 23230	804.358.8295	COD, BOD, TOC, some Quarterly TSS
Schneider Laboratories, Inc	2512 West Cary Street Richmond, VA 23220	804.353.6778	Some Quarterly TSS
Coastal Bioanalysts	6400 Enterprise Court Gloucester, VA 23061	804.694.8285	Whole Effluent Toxicity. (Collected during the 1st year of the permit.

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (*type or print*)	B. PHONE NO. (*area code & no.*)
William T. Rayburn, EHS Supervisor	(434) 348-4300
C. SIGNATURE EHS Supervisor	D. DATE SIGNED 10/12/2010

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): VA0091456

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 001

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<2						1	mg/L				
b. Chemical Oxygen Demand (*COD*)	<10						1	mg/L				
c. Total Organic Carbon (*TOC*)	1.2						1	mg/L				
d. Total Suspended Solids (*TSS*)	39.0				14.46		12	mg/L				
e. Ammonia (*as N*)	0.06				0.04		2	mg/L				
f. Flow	VALUE 10.080		VALUE		VALUE 2.366		12	MGD		VALUE		
g. Temperature (*winter*)	VALUE 20.7		VALUE		VALUE 10.0		17	°C		VALUE		
h. Temperature (*summer*)	VALUE 27.7		VALUE		VALUE 27.7		2	°C		VALUE		
i. pH	MINIMUM 4.86	MAXIMUM 8.89	MINIMUM	MAXIMUM			22	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual	X		0.07						2	mg/L				
c. Color		X												
d. Fecal Coliform	X		2						1	mpn				
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)		X												

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X												
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)		X												
j. Radioactivity														
(1) Alpha, Total	X		1.3				0.65		2	pCi/l				
(2) Beta, Total	X		46.3				24.4		2	pCi/l				
(3) Radium, Total		X												
(4) Radium 226, Total	X		0.20						1	pCi/l				
k. Sulfate (*as SO_4*) (14808-79-8)		X												
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)		X												
p. Barium, Total (7440-39-3)		X												
q. Boron, Total (7440-42-8)		X												
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)		X												
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)		X												
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA0091456	001

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X			<0.0014						2	mg/L				
2M. Arsenic, Total (7440-38-2)	X			<0.001						2	mg/L				
3M. Beryllium, Total (7440-41-7)	X			0.0003						1	mg/L				
4M. Cadmium, Total (7440-43-9)	X			<0.003						2	mg/L				
5M. Chromium, Total (7440-47-3)	X			<0.0016						2	mg/L				
6M. Copper, Total (7440-50-8)	X			<0.0005						2	mg/L				
7M. Lead, Total (7439-92-1)	X			<0.0005						2	mg/L				
8M. Mercury, Total (7439-97-6)	X			<0.0002						2	mg/L				
9M. Nickel, Total (7440-02-0)	X			<0.00094						2	mg/L				
10M. Selenium, Total (7782-49-2)	X			<0.002						2	mg/L				
11M. Silver, Total (7440-22-4)	X			<0.0002						2	mg/L				
12M. Thallium, Total (7440-28-0)	X			0.002						2	mg/L				
13M. Zinc, Total (7440-66-6)	X			<0.0036						2	mg/L				
14M. Cyanide, Total (57-12-5)	X			<0.010						2	mg/L				
15M. Phenols, Total	X			<10						2	ug/L				
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X			<5						2	ug/L				
2V. Acrylonitrile (107-13-1)	X			<5						2	ug/L				
3V. Benzene (71-43-2)	X			<5						2	ug/L				
4V. Bis (*Chloromethyl*) Ether (542-88-1)	X			<10						2	ug/L				
5V. Bromoform (75-25-2)	X			<5						2	ug/L				
6V. Carbon Tetrachloride (56-23-5)	X			<5						2	ug/L				
7V. Chlorobenzene (108-90-7)	X			<5						2	ug/L				
8V. Chlorodibromomethane (124-48-1)	X			<5						2	ug/L				
9V. Chloroethane (75-00-3)	X			<10						1	ug/L				
10V. 2-Chloroethylvinyl Ether (110-75-8)	X			<10						1	ug/L				
11V. Chloroform (67-66-3)	X			<5						2	ug/L				
12V. Dichlorobromomethane (75-27-4)	X			<5						2	ug/L				
13V. Dichlorodifluoromethane (75-71-8)	X			<1						1	ug/L				
14V. 1,1-Dichloroethane (75-34-3)	X			<5						1	ug/L				
15V. 1,2-Dichloroethane (107-06-2)	X			<5						1	ug/L				
16V. 1,1-Dichloroethylene (75-35-4)	X			<5						1	ug/L				
17V. 1,2-Dichloropropane (78-87-5)	X			<5						2	ug/L				
18V. 1,3-Dichloropropylene (542-75-6)	X			<10						1	ug/L				
19V. Ethylbenzene (100-41-4)	X			<5						2	ug/L				
20V. Methyl Bromide (74-83-9)	X			<5						2	ug/L				
21V. Methyl Chloride (74-87-3)	X			<5						1	ug/L				

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X			<5						1	ug/L				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			<5						2	ug/L				
24V. Tetrachloroethylene (127-18-4)	X			<5						1	ug/L				
25V. Toluene (108-88-3)	X			<5						2	ug/L				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<5						1	ug/L				
27V. 1,1,1-Trichloroethane (71-55-6)	X			<10						1	ug/L				
28V. 1,1,2-Trichloroethane (79-00-5)	X			<5						2	ug/L				
29V Trichloroethylene (79-01-6)	X			<5						1	ug/L				
30V. Trichlorofluoromethane (75-69-4)	X			<10						1	ug/L				
31V. Vinyl Chloride (75-01-4)	X			<5						1	ug/L				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X			<10						2	ug/L				
2A. 2,4-Dichlorophenol (120-83-2)	X			<10						2	ug/L				
3A. 2,4-Dimethylphenol (105-67-9)	X			<10						2	ug/L				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<50						1	ug/L				
5A. 2,4-Dinitrophenol (51-28-5)	X			<10						2	ug/L				
6A. 2-Nitrophenol (88-75-5)	X			<1						1	ug/L				
7A. 4-Nitrophenol (100-02-7)	X			<50						1	ug/L				
8A. P-Chloro-M-Cresol (59-50-7)	X			<10						1	ug/L				
9A. Pentachlorophenol (87-86-5)	X			<10						2	ug/L				
10A. Phenol (108-95-2)	X			<10						2	ug/L				
11A. 2,4,6-Trichlorophenol (88-05-2)	X			<10						2	ug/L				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X			<10						2	ug/L				
2B. Acenaphtylene (208-96-8)	X			<10						1	ug/L				
3B. Anthracene (120-12-7)	X			<10						2	ug/L				
4B. Benzidine (92-87-5)	X			<10						2	ug/L				
5B. Benzo (*a*) Anthracene (56-55-3)	X			<10						2	ug/L				
6B. Benzo (*a*) Pyrene (50-32-8)	X			<10						2	ug/L				
7B. 3,4-Benzo-fluoranthene (205-99-2)	X			<10						1	ug/L				
8B. Benzo (*ghi*) Perylene (191-24-2)	X			<10						1	ug/L				
9B. Benzo (*k*) Fluoranthene (207-08-9)	X			<10						2	ug/L				
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X			<10						1	ug/L				
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X			<10						2	ug/L				
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X			<10						2	ug/L				
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X			<10						1	ug/L				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X			<10						1	ug/L				
15B. Butyl Benzyl Phthalate (85-68-7)	X			<10						2	ug/L				
16B. 2-Chloro-naphthalene (91-58-7)	X			<10						2	ug/L				
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X			<10						1	ug/L				
18B. Chrysene (218-01-9)	X			<10						2	ug/L				
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X			<10						2	ug/L				
20B. 1,2-Dichloro-benzene (95-50-1)	X			<10						1	ug/L				
21B. 1,3-Di-chloro-benzene (541-73-1)	X			<10						1	ug/L				

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)	X			<10						1	ug/L				
23B. 3,3-Dichlorobenzidine (91-94-1)	X			<10						2	ug/L				
24B. Diethyl Phthalate (84-66-2)	X			<10						2	ug/L				
25B. Dimethyl Phthalate (131-11-3)	X			<10						2	ug/L				
26B. Di-N-Butyl Phthalate (84-74-2)	X			<10						2	ug/L				
27B. 2,4-Dinitrotoluene (121-14-2)	X			<10						2	ug/L				
28B. 2,6-Dinitrotoluene (606-20-2)	X			<10						1	ug/L				
29B. Di-N-Octyl Phthalate (117-84-0)	X			<10						1	ug/L				
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)	X			<10						2	ug/L				
31B. Fluoranthene (206-44-0)	X			<10						2	ug/L				
32B. Fluorene (86-73-7)	X			<10						2	ug/L				
33B. Hexachlorobenzene (118-74-1)	X			<10						2	ug/L				
34B. Hexachlorobutadiene (87-68-3)	X			<10						2	ug/L				
35B. Hexachlorocyclopentadiene (77-47-4)	X			<10						2	ug/L				
36B Hexachloroethane (67-72-1)	X			<10						2	ug/L				
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X			<10						2	ug/L				
38B. Isophorone (78-59-1)	X			<10						2	ug/L				
39B. Naphthalene (91-20-3)	X			<10						1	ug/L				
40B. Nitrobenzene (98-95-3)	X			<10						2	ug/L				
41B. N-Nitrosodimethylamine (62-75-9)	X			<10						2	ug/L				
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X			<10						2	ug/L				

CONTINUED FROM THE FRONT

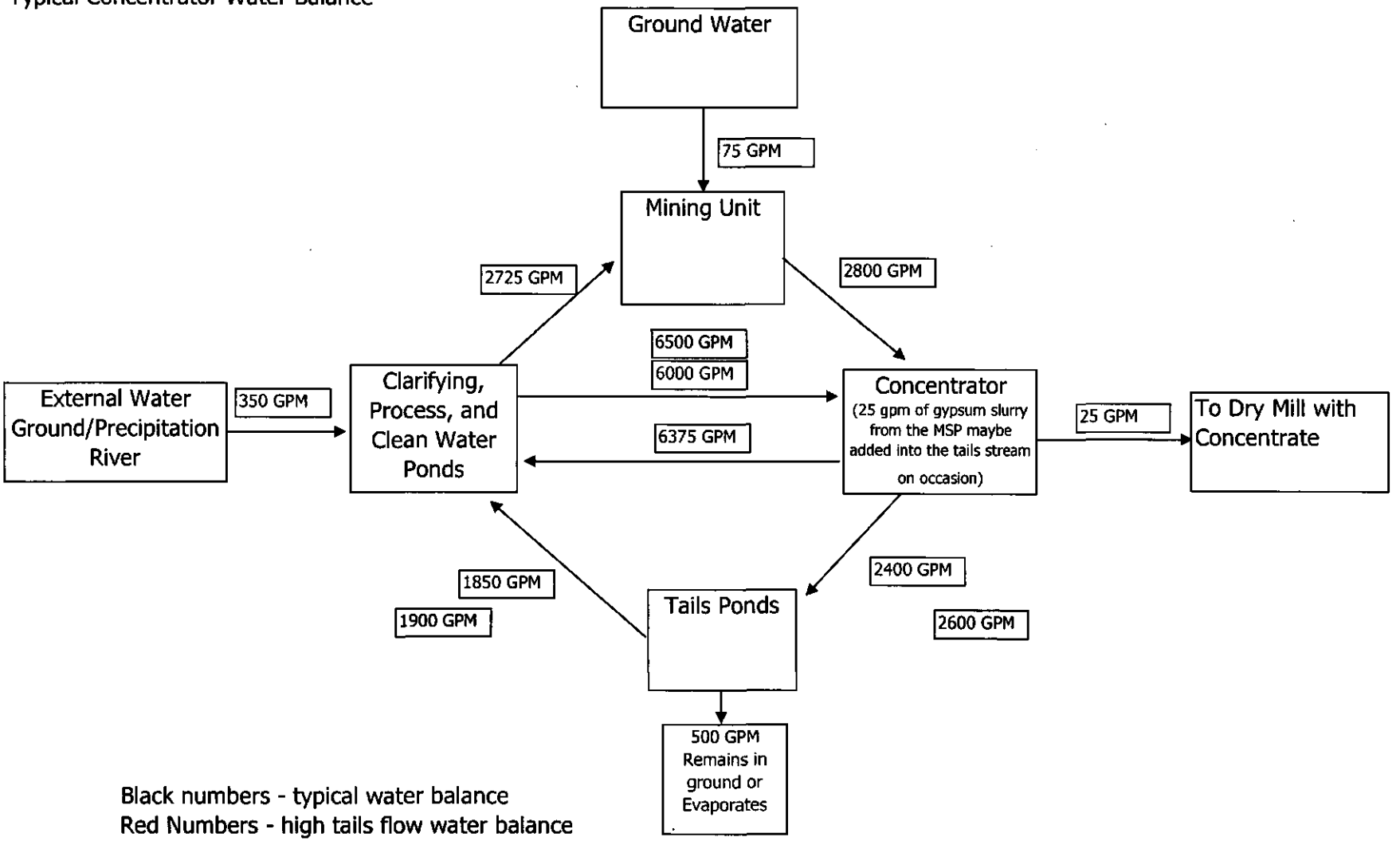
1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X			<10						2	ug/L				
44B. Phenanthrene (85-01-8)	X			<10						1	ug/L				
45B. Pyrene (129-00-0)	X			<10						2	ug/L				
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X			<10						2	ug/L				
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X			<0.05						2	ug/L				
2P. α-BHC (319-84-6)	X			<0.05						2	ug/L				
3P. β-BHC (319-85-7)	X			<0.05						2	ug/L				
4P. γ-BHC (58-89-9)	X			<0.05						1	ug/L				
5P. δ-BHC (319-86-8)	X			<0.05						1	ug/L				
6P. Chlordane (57-74-9)	X			<0.20						2	ug/L				
7P. 4,4'-DDT (50-29-3)	X			<0.10						2	ug/L				
8P. 4,4'-DDE (72-55-9)	X			<0.10						2	ug/L				
9P. 4,4'-DDD (72-54-8)	X			<0.10						2	ug/L				
10P. Dieldrin (60-57-1)	X			<0.10						2	ug/L				
11P. α-Enosulfan (115-29-7)	X			<0.1						1	ug/L				
12P. β-Endosulfan (115-29-7)	X			<0.04						1	ug/L				
13P. Endosulfan Sulfate (1031-07-8)	X			<0.10						2	ug/L				
14P. Endrin (72-20-8)	X			<0.10						2	ug/L				
15P. Endrin Aldehyde (7421-93-4)	X			<0.10						2	ug/L				
16P. Heptachlor (76-44-8)	X			<0.10						2	ug/L				

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA0091456	001

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X			<0.10						2	ug/L				
18P. PCB-1242 (53469-21-9)	X			<1.0						2	ug/L				
19P. PCB-1254 (11097-69-1)	X			<1.0						2	ug/L				
20P. PCB-1221 (11104-28-2)	X			<1.0						2	ug/L				
21P. PCB-1232 (11141-16-5)	X			<1.0						2	ug/L				
22P. PCB-1248 (12672-29-6)	X			<1.0						2	ug/L				
23P. PCB-1260 (11096-82-5)	X			<1.0						2	ug/L				
24P. PCB-1016 (12674-11-2)	X			<1.0						2	ug/L				
25P. Toxaphene (8001-35-2)	X			<5.0						2	ug/L				

Typical Concentrator Water Balance



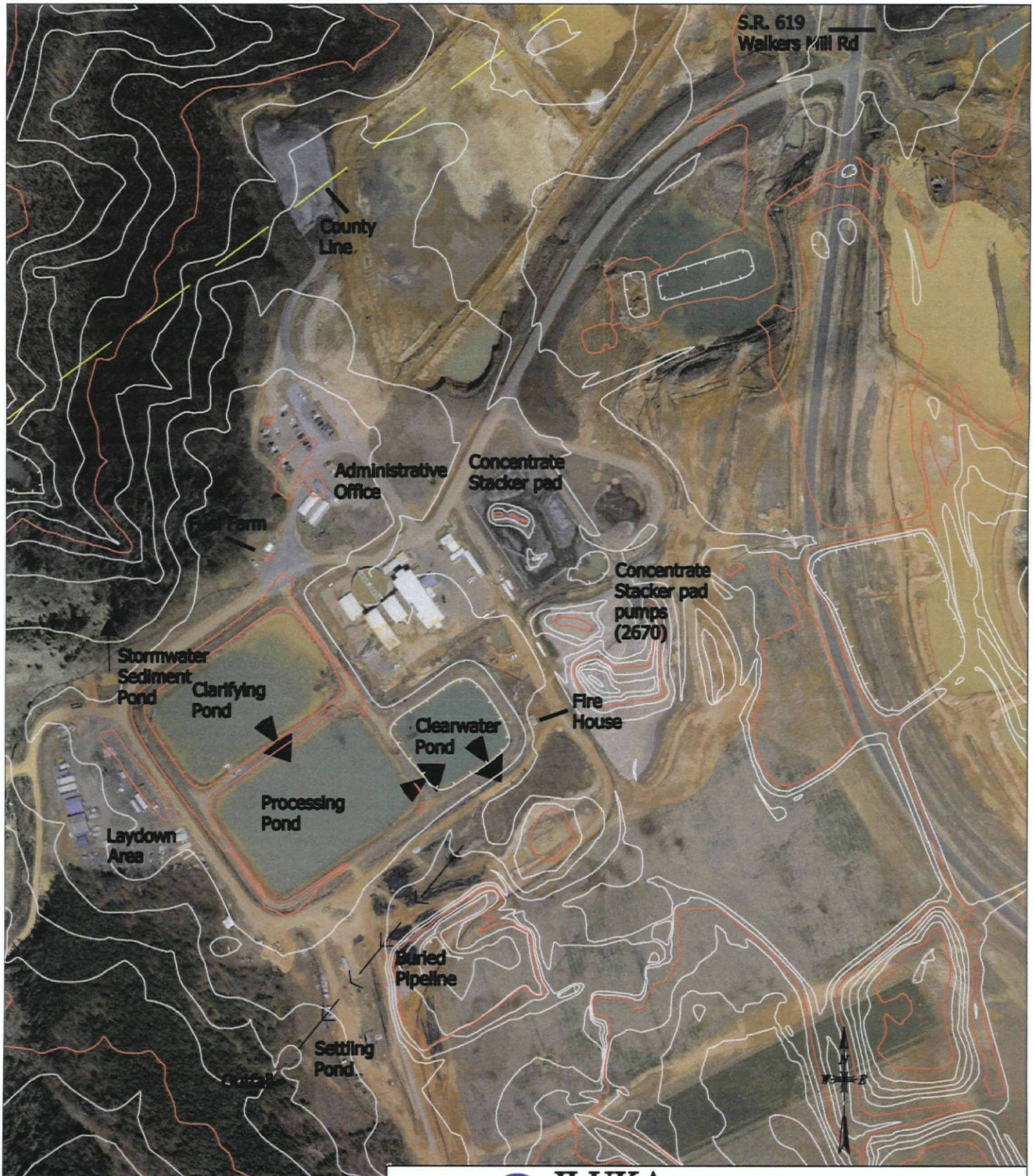
Black numbers - typical water balance
Red Numbers - high tails flow water balance

ILUKA RESOURCES INC.
12472 St. John Church Road Stony Creek, Virginia 23882-3239
Phone (434) 348-4300 FAX (434) 246-3039

VIRGINIA OPERATIONS

VPDES Permit Map
Concord

SCALE 1"=600'	DRAWING PATH M:\MinePlanning\Permitting\DEQ\VPDES\2010\9\	DRAFTED C. Zimmerman	04-16-04	REVISED	
DATUM Local		REVISED C. Warren	09-13-10	REVISED	
FILE NAME CC VPDES 10 v1.dwg		REVISED		REVISED	
		REVISED		APPROVED	



ILUKA RESOURCES INC.
12472 St. John Church Road Stony Creek, Virginia 23882-3239
Phone (434) 348-4300 FAX (434) 246-3039

VIRGINIA OPERATIONS

VPDES Permit Map
Concord

SCALE 1"=300'	DRAWING PATH M:\MinePlanning\Permitting\DEQ\VPDES\2010\9\	DRAFTED C. Zimmerman	04-15-04	REVISED	
DATUM Local		REVISED C. Warren	09-21-10	REVISED	
FILE NAME CC VPDES 10 v1.dwg		REVISED		REVISED	
		REVISED		APPROVED	

AIR WATER & SOIL LABORATORIES, INC.®
2109A North Hamilton Street • Richmond, Virginia 23230 • Tel: (804) 358-8295 Fax: (804) 358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 10090323

Client Name: Iluka Resources, Inc.
12472 St. John Church Road
Stony Creek, VA 23832

Date Received: September 17, 2010
Date Issued: September 27, 2010

Submitted To: Kevin Rideout
Client Site I.D.: Concord

Project Number: NA
Purchase Order 10-92199

Analytical Results

Sample I.D.: Concord Process Water
Date/Time Sampled: 09/16/10 11:08

Laboratory Sample I.D.: 10090323-001

Parameter	Method	Sample Results	Qual	Rep Limi	Analysis Date/Time	Analyst
Beryllium	EPA200.9/R2.2	0.0003 mg/L		0.0003	09/23/10 16:36	WBP
Dichlorodifluoromethane	SW8260B	< 1 ug/L		1	09/24/10 0:17	DMB
Chloroethane	EPA624	< 10 ug/L		10	09/24/10 3:42	DMB
Trichlorofluoromethane	EPA624	< 10 ug/L		10	09/24/10 3:42	DMB
1,1,1-Trichloroethane	EPA624	< 10 ug/L		10	09/24/10 3:42	DMB
2-Chloroethyl vinyl ether	EPA624	< 10 ug/L		10	09/24/10 3:42	DMB
cis-1,3-Dichloropropene	EPA624	< 10 ug/L		10	09/24/10 3:42	DMB
trans-1,3-Dichloropropene	EPA624	< 10 ug/L		10	09/24/10 3:42	DMB
Endosulfan I	EPA608	< 0.1 ug/L		0.1	09/23/10 5:55	SKS
Endosulfan II	EPA608	< 0.04 ug/L		0.04	09/23/10 5:55	SKS
4-Chloro-3-methylphenol	EPA625	< 10 ug/L		10	09/22/10 19:32	JHV
4,6-Dinitro-2-methylphenol	EPA625	< 50 ug/L		50	09/22/10 19:32	JHV
2-Nitrophenol	EPA625	< 10 ug/L		10	09/22/10 19:32	JHV
4-Nitrophenol	EPA625	< 50 ug/L		50	09/22/10 19:32	JHV
Acenaphthylene	EPA625	< 10 ug/L		10	09/22/10 19:32	JHV
Benzo (b) fluoranthene	EPA625	< 10 ug/L		10	09/22/10 19:32	JHV
Benzo (g,h,i) perylene	EPA625	< 10 ug/L		10	09/22/10 19:32	JHV
4-Bromophenyl phenyl ether	EPA625	< 10 ug/L		10	09/22/10 19:32	JHV
bis (2-Chloroethoxy) methane	EPA625	< 10 ug/L		10	09/22/10 19:32	JHV
4-Chlorophenyl phenyl ether	EPA625	< 10 ug/L		10	09/22/10 19:32	JHV
2,6-Dinitrotoluene	EPA625	< 10 ug/L		10	09/22/10 19:32	JHV
Di-n-octyl phthalate	EPA625	< 10 ug/L		10	09/22/10 19:32	JHV
bis (2-Ethylhexyl) phthalate	EPA625	< 10 ug/L		10	09/22/10 19:32	JHV
Naphthalene	EPA625	< 10 ug/L		10	09/22/10 19:32	JHV
Phenanthrene	EPA625	< 10 ug/L		10	09/22/10 19:32	JHV

AIR WATER SOIL LABORATORIES, INC.®
2109A North Hamilton Street • Richmond, Virginia 23230 • Tel: (804) 358-8295 Fax: (804) 358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 10090323

Client Name: Iluka Resources, Inc.
12472 St. John Church Road
Stony Creek, VA 23832

Date Received: September 17, 2010
Date Issued: September 27, 2010

Submitted To: Kevin Rideout
Client Site I.D.: Concord

Project Number: NA
Purchase Order 10-92199

Analytical Results

Sample I.D.: Concord Process Water
Date/Time Sampled: 09/16/10 11:08

Laboratory Sample I.D.: 10090323-001

Parameter	Method	Sample Results	Qual	Rep Limi	Analysis Date/Time	Analyst

Summary of Analytical QC Batches

QC Batch ID	Method	Sample List
QC100923041	EPA625	10090323-001
QC100924002	EPA200.9/R2.2	10090323-001
QC100924008	EPA608	10090323-001
QC100924024	EPA624	10090323-001
QC100927021	SW8260B	10090323-001

QC I	Parameter	Qualifier	Comments
LCSD	4-Chloro-3-methylphenol	P	
LCSD	4-Nitrophenol	P	
MSD	4-Chloro-3-methylphenol	P	
MSD	4-Nitrophenol	P	

Qualifier Definations

Qualifier	Description
P	Duplicate analysis does not meet the acceptance criteria for precision

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(804) 358-8295 PHONE
(804)358-8297 FAX

CHAIN OF CUSTODY

PAGE ____ OF ____

CLIENT NAME: Iluka Resources Inc
CLIENT CONTACT: Kevin Rideout
CLIENT ADDRESS: 12472 St. John Church Road Stony Creek VA 23882
CLIENT PHONE NUMBER: 434.348.4316
CLIENT FAX NUMBER: 434.246.3039 EMAIL: Kevin.rideout@iluka.com

PROJECT NAME: Concord Process Water
SITE NAME: Concord
PROJECT NUMBER:
P.O. NUMBER: 10-92199
REGULATORY AUTHORITY: DEQ

sample for compliance reporting? (YES) NO
Is sample from a chlorinated supply? YES (NO)
PWS I.D. #:

SAMPLER NAME (PRINT): Kevin Rideout
SAMPLER SIGNATURE: Kevin Rideout
Turn Around Time: 10 Day(s)

ve ammonia and TKN samples been verified to be dechlorinated at the time of sampling?: YES NO

CLIENT SAMPLE I.D.	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Number of Containers	Grab	Composite	Field Filtered (Dissolved Metals)	MATRIX: Ground Water / Surface Water	MATRIX: Waste Water / Storm Water	MATRIX: Drinking Water	MATRIX: Soil	MATRIX: Solids	MATRIX: Other	ANALYSIS / (PRESERVATIVE)	COMMENTS
															Please see attachment. The analysis required are highlighted.	Quote I.D.:
Concord Process Water			9/16/10	11:08	7	✓				✓					✓ ✓ ✓ ✓ ✓ ✓ ✓	PLEASE NOTE PRESERVATIVE(S) or PUMP RATE (L/min)

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
Kevin Rideout	9/16/10 14:47		9/16/10 14:47
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
	9/16/10 1648		9/16/10
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME

QC Data Package
Level I ☐
Level II ☐
Level III ☑
Level IV ☐

LAB USE ONLY
Iluka
Concord
10090323
DUE: 5 Days
Recd: 09/17/10

COOLER TEMP 4.1 °C
nice

J80819.xls

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Iluka
Concord

10090323
DUE: 5 Days
Recd: 09/17/10

Sample Conditions Checklist

Opened by: (Initials) NW

Lab ID No.:

Date Cooler Opened: 9/17/10

		YES	NO	N/A
1.	How were samples received?			
	Fed Ex ☐			
	UPS ☐			
	Courier ☐			
	Walk In ☑			
2.	Were custody seals used?	☐	☐	☑
3.	If yes, are custody seals unbroken and intact at the date and time of arrival?	☐	☐	☑
4.	Are the custody papers filled out completely and correctly?	☑	☐	☐
5.	Do all bottle labels agree with custody papers?	☑	☐	☐
6.	Are the samples received on ice?	☑	☐	☐
7.	Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C)	☑	☐	☐
8.	Are all samples within holding time for requested laboratory tests?	☑	☐	☐
9	Is a sufficient amount of sample provided to perform the tests indicated?	☑	☐	☐
10	Are all samples in proper containers for the analyses requested?	☑	☐	☐
11	Are all samples appropriately preserved for the analyses requested?	☑	☐	☐
12	Are all volatile organic containers free of headspace?	☑	☐	☐

COMMENTS

AIR WATER & SOIL LABORATORIES, INC.

pH Preservation Log

Order ID 10090323

Date Performed: 9/17/10

Analyst Performing Check: [signature]

Sample ID	Container ID	Metals			Cyanide			Sulfide			Ammonia			TKN			Phos, Tot			NO3+NO2			DRO								
		pH as Received		Final pH (If adjust.)	pH as Received		Final pH (If adjust.)	pH as Received		Final pH (If adjust.)	pH as Received		Final pH (If adjust.)	pH as Received		Final pH (If adjust.)	pH as Received		Final pH (If adjust.)	pH as Received		Final pH (If adjust.)	pH as Received		Final pH (If adjust.)	pH as Received		Final pH (If adjust.)	pH as Received		Final pH (If adjust.)
		< 2	Other		> 12	Other		> 9	Other		< 2	Other		< 2	Other		< 2	Other		< 2	Other		< 2	Other			Other			Other	
001	01	✓																													

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Certificate of Analysis

Final Report

Laboratory Order ID 10090066

Client Name:	Iluka Resources, Inc. 12472 St. John Church Road Stony Creek, VA 23832	Date Received: Date Issued:	September 02, 2010 September 08, 2010
Submitted To:	Kevin Rideout	Project Number:	NA
Client Site I.D.:	Concord Clean Water Pond	Purchase Order	10-92199

Sample Summary List

Laboratory Sample ID	Sample ID	Sample Date	Receive Date
10090066-001	Concord Clean Water Pond	09/02/2010	09/02/2010

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a dry weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

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090820101735

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Certificate of Analysis

Final Report

Laboratory Order ID 10090066

Client Name: Iluka Resources, Inc.
12472 St. John Church Road
Stony Creek, VA 23832

Date Received: September 02, 2010
Date Issued: September 08, 2010

Submitted To: Kevin Rideout

Project Number: NA

Client Site I.D.: Concord Clean Water Pond

Purchase Order 10-92199

Analytical Results

Sample I.D.: Concord Clean Water Pond

Laboratory Sample I.D.: 10090066-001

Date/Time Sampled: 09/02/10 13:09

Parameter	Method	Sample Results	Qual	Rep Limi	Analysis Date/Time	Analyst
BOD	SM18/5210B	< 2 mg/L		2	09/03/10 9:34	KAA
COD	EPA410.4/R2.0	< 10 mg/L		10	09/03/10 9:45	BMB
Total Organic Carbon (TOC)	SM18/5310C	1.2 mg/L		1	09/07/10 11:57	BHW

Summary of Analytical QC Batches

QC Batch ID	Method	Sample List
QC100903027	EPA410.4/R2.0	10090066-001
QC100908014	SM18/5310C	10090066-001

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CHAIN OF CUSTODY

PAGE ____ OF ____

CLIENT NAME: Iluka Resources Inc	PROJECT NAME: Concord Clean Water Pond
CLIENT CONTACT: Kevin Rideout	SITE NAME: Concord
CLIENT ADDRESS: 12472 St. John Church Road Stony Creek, VA 23885	PROJECT NUMBER:
CLIENT PHONE NUMBER: 434.348.4316	P.O. NUMBER: 10-92199
CLIENT FAX NUMBER: 434.246.3039 EMAIL: Kevin.rideout@iluka.com	REGULATORY AUTHORITY: DEQ
Is sample for compliance reporting? (YES) NO — Is sample from a chlorinated supply? YES (NO)	PWS I.D. #:
SAMPLER NAME (PRINT): Kevin Rideout SAMPLER SIGNATURE: Kevin Rideout	Turn Around Time: (ASAP) Day(s)

Have ammonia and TKN samples been verified to be dechlorinated at the time of sampling?: YES NO

CLIENT SAMPLE I.D.	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Number of Containers	Grab	Composite	Field Filtered (Dissolved Metals)	MATRIX: Ground Water / Surface Water	Waste Water / Storm Water	Drinking Water	Soil	Solids	Other	ANALYSIS / (PRESERVATIVE): BOD	COD (pH<2 9/2/10 H2SO4)	TOC (pH<3 H2SO4 9/2/10)				COMMENTS: Quote I.D.:
1) Concord Clean Water Pond			9/2/10	13:09	4	✓				✓					✓	✓	✓				
2)																					
3)																					
4)																					
5)																					
6)																					
7)																					
8)																					
9)																					
10)																					

PLEASE NOTE PRESERVATIVE(S) or PUMP RATE (L/min)

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
Kevin Rideout	9/2/10 14:01		9/2/10 14:01
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
	9/2/10 1635	Jessica Roach	9/2/10 1635
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME

QC Data Package
- Level I ☐
- Level II ☐
- Level III ☐
- Level IV ☐

LAB USE ONLY — COOLER TEMP 6.0 °C

99006001

Iluka
Concord Clean Water Pond

10090066
DUE: 3 Days
Recd: 09/02/10

119.xls

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Iluka
Concord Clean Water Pond

10090066
DUE: 3 Days
Recd: 09/02/10

Sample Conditions Checklist

Opened by: (Initials) JCR

Lab ID No.:

Date Cooler Opened: 9/2/10

		YES	NO	N/A
1.	How were samples received? Fed Ex ☐ UPS ☐ Courier ☐ Walk In ☑			
2.	Were custody seals used?	☑	☐	☐
3.	If yes, are custody seals unbroken and intact at the date and time of arrival?	☑	☐	☐
4.	Are the custody papers filled out completely and correctly?	☑	☐	☐
5.	Do all bottle labels agree with custody papers?	☑	☐	☐
6.	Are the samples received on ice?	☑	☐	☐
7.	Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C)	☑	☐	☐
8.	Are all samples within holding time for requested laboratory tests?	☑	☐	☐
9	Is a sufficient amount of sample provided to perform the tests indicated?	☑	☐	☐
10	Are all samples in proper containers for the analyses requested?	☑	☐	☐
11	Are all samples appropriately preserved for the analyses requested?	☑	☐	☐
12	Are all volatile organic containers free of headspace?	☐	☐	☑

COMMENTS

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Certificate of Analysis

Final Report

Laboratory Order ID 10090131

Client Name:	Iluka Resources, Inc. 12472 St. John Church Road Stony Creek, VA 23832	Date Received: Date Issued:	September 08, 2010 September 09, 2010
Submitted To:	Kevin Rideout	Project Number:	NA
Client Site I.D.:	Concord	Purchase Order	10-92199

Sample Summary List

Laboratory Sample ID	Sample ID	Sample Date	Receive Date
10090131-001	Clean Water Pond	09/08/2010	09/08/2010

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a dry weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

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Certificate of Analysis

Final Report

Laboratory Order ID 10090131

Client Name: Iluka Resources, Inc.
12472 St. John Church Road
Stony Creek, VA 23832

Date Received: September 08, 2010
Date Issued: September 09, 2010

Submitted To: Kevin Rideout

Project Number: NA

Client Site I.D.: Concord

Purchase Order 10-92199

Analytical Results

Sample I.D.: Clean Water Pond

Laboratory Sample I.D.: 10090131-001

Date/Time Sampled: 09/08/10 10:00

Parameter	Method	Sample Results	Qual	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	2 mpn/100mL		2	09/08/10 14:00	WBP

Summary of Analytical QC Batches

QC Batch ID	Method	Sample List
QC100909036	SM18/9221E	10090131-001

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CHAIN OF CUSTODY

PAGE ____ OF ____

CLIENT NAME: Iluka Resources Inc	PROJECT NAME: Concord Clean Water Pond
CLIENT CONTACT: 12472 St. John Church Rd. Stony Creek, VA 23882	SITE NAME: Concord
CLIENT ADDRESS: Kevin Rideout	PROJECT NUMBER:
CLIENT PHONE NUMBER: 434.348.4316	P.O. NUMBER: 10-92199
CLIENT FAX NUMBER: 434.246.3039 EMAIL: Kevin.rideout@iluka.com	REGULATORY AUTHORITY: DEQ
Is sample for compliance reporting? (YES) NO	Is sample from a chlorinated supply? YES (NO)
SAMPLER NAME (PRINT): Kevin Rideout	SAMPLER SIGNATURE: Kevin Rideout
Have ammonia and TKN samples been verified to be dechlorinated at the time of sampling?: YES (NO)	PWS I.D. #: N/A
	Turn Around Time: 2 Day(s)

CLIENT SAMPLE I.D.	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Number of Containers	Grab	Composite	Field Filtered (Dissolved Metals)	MATRIX: Ground Water / Surface Water	MATRIX: Waste Water / Storm Water	MATRIX: Drinking Water	MATRIX: Soil	MATRIX: Solids	MATRIX: Other	ANALYSIS / (PRESERVATIVE): Fecal Coli. form / Chlorine Neutralized	ANALYSIS / (PRESERVATIVE)	COMMENTS
1) Clean Water Pond			9/8/10	10:00	1	✓				✓					✓		Quote I.D.: PLEASE NOTE PRESERVATIVE(S) or PUMP RATE (L/min)
2)																	
3)																	
4)																	
5)																	
6)																	
7)																	
8)																	
9)																	
10)																	

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
Kevin Rideout	9/8/10 10:44	Debi Zeyler	9/9/10 10:44
Debi Zeyler	9/8/10 1:22pm	Jessica Church	9/8/10 1327
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME

QC Data Package
- Level I ☐
- Level II ☐
- Level III ☐
- Level IV ☐

LAB USE ONLY

Iluka
Concord

10090131

DUE: 2 Days
Recd: 09/08/10

COOLER TEMP 9.1 °C
on ice

v080819.xls

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Iluka
Concord

10090131
DUE: 2 Days
Recd: 09/08/10

Sample Conditions Checklist

Opened by: (Initials) _____ Lab ID No.: _____

Date Cooler Opened: 9/8/10

		YES	NO	N/A
1.	How were samples received? Fed Ex ☐ UPS ☐ Courier ☐ Walk In ☑			
2.	Were custody seals used?	☐	☐	☑
3.	If yes, are custody seals unbroken and intact at the date and time of arrival?	☐	☐	☑
4.	Are the custody papers filled out completely and correctly?	☑	☐	☐
5.	Do all bottle labels agree with custody papers?	☑	☐	☐
6.	Are the samples received on ice?	☑	☐	☐
7.	Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C)	☑	☐	☐
8.	Are all samples within holding time for requested laboratory tests?	☑	☐	☐
9	Is a sufficient amount of sample provided to perform the tests indicated?	☑	☐	☐
10	Are all samples in proper containers for the analyses requested?	☑	☐	☐
11	Are all samples appropriately preserved for the analyses requested?	☑	☐	☐
12	Are all volatile organic containers free of headspace?	☐	☐	☑

COMMENTS

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Certificate of Analysis

Final Report

Laboratory Order ID 10090131

Client Name:	Iluka Resources, Inc. 12472 St. John Church Road Stony Creek, VA 23832	Date Received: Date Issued:	September 08, 2010 September 09, 2010
Submitted To:	Kevin Rideout	Project Number:	NA
Client Site I.D.:	Concord	Purchase Order	10-92199

Sample Summary List

Laboratory Sample ID	Sample ID	Sample Date	Receive Date
10090131-001	Clean Water Pond	09/08/2010	09/08/2010

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a dry weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

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Certificate of Analysis

Final Report

Laboratory Order ID 10090131

Client Name: Iluka Resources, Inc.
12472 St. John Church Road
Stony Creek, VA 23832

Date Received: September 08, 2010
Date Issued: September 09, 2010

Submitted To: Kevin Rideout
Project Number: NA
Client Site I.D.: Concord
Purchase Order 10-92199

Analytical Results

Sample I.D.: Clean Water Pond
Laboratory Sample I.D.: 10090131-001
Date/Time Sampled: 09/08/10 10:00

Parameter	Method	Sample Results	Qual	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	2 mpn/100mL		2	09/08/10 14:00	WBP

Summary of Analytical QC Batches

QC Batch ID	Method	Sample List
QC100909036	SM18/9221E	10090131-001

090920101613

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(804)358-8297 FAX

CHAIN OF CUSTODY

PAGE _____ OF _____

CLIENT NAME: Iluka Resources Inc	PROJECT NAME: Concord Clean Water Pond
CLIENT CONTACT: 12472 St. John Church Rd. Stony Creek, VA 23882	SITE NAME: Concord
CLIENT ADDRESS: Kevin Rideout	PROJECT NUMBER:
CLIENT PHONE NUMBER: 434.348.4316	P.O. NUMBER: 10-92199
CLIENT FAX NUMBER: 434.246.3039 EMAIL: Kevin.rideout@iluka.com	REGULATORY AUTHORITY: DEQ

Is sample for compliance reporting? (YES) NO — Is sample from a chlorinated supply? YES (NO) — PWS I.D. #: N/A

SAMPLER NAME (PRINT): Kevin Rideout — SAMPLER SIGNATURE: Kevin Rideout — Turn Around Time: 2 Day(s)

Have ammonia and TKN samples been verified to be dechlorinated at the time of sampling?: YES (NO)

CLIENT SAMPLE I.D.	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Number of Containers	MATRIX: Grab	Composite	Field Filtered (Dissolved Metals)	Ground Water / Surface Water	Waste Water / Storm Water	Drinking Water	Soil	Solids	Other	ANALYSIS / (PRESERVATIVE): Fecal Coliform / chlorine Neutralized							COMMENTS: Quote I.D.: PLEASE NOTE PRESERVATIVE(S) or PUMP RATE (L/min)
1) Clean Water Pond			9/8/10	10:00	1	✓				✓					✓							
2)																						
3)																						
4)																						
5)																						
6)																						
7)																						
8)																						
9)																						
10)																						

RELINQUISHED	DATE / TIME	RECEIVED	DATE / TIME
Kevin Rideout	9/8/10 10:44	Debi Vezler	9/8/10 10:44
Debi Vezler	9/8/10 1:27pm	Jessica Reich	9/8/10 1327

QC Data Package: Level I ☐ Level II ☐ Level III ☐ Level IV ☐

LAB USE ONLY

COOLER TEMP 9.1 °C on ice

Iluka
Concord

10090131
DUE: 2 Days
Recd: 09/08/10

v080819.xls

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Iluka
Concord

10090131
DUE: 2 Days
Recd: 09/08/10

Sample Conditions Checklist

Opened by: (Initials) SMJ Lab ID No.:

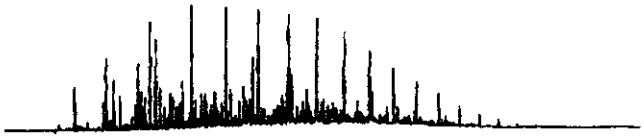
Date Cooler Opened: 9/8/10

		YES	NO	N/A
1.	How were samples received? Fed Ex ☐ UPS ☐ Courier ☐ Walk In ☑			
2.	Were custody seals used?	☐	☐	☑
3.	If yes, are custody seals unbroken and intact at the date and time of arrival?	☐	☐	☑
4.	Are the custody papers filled out completely and correctly?	☑	☐	☐
5.	Do all bottle labels agree with custody papers?	☑	☐	☐
6.	Are the samples received on ice?	☑	☐	☐
7.	Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C)	☑	☐	☐
8.	Are all samples within holding time for requested laboratory tests?	☑	☐	☐
9	Is a sufficient amount of sample provided to perform the tests indicated?	☑	☐	☐
10	Are all samples in proper containers for the analyses requested?	☑	☐	☐
11	Are all samples appropriately preserved for the analyses requested?	☑	☐	☐
12	Are all volatile organic containers free of headspace?	☐	☐	☑

COMMENTS

Primary Laboratories, Inc.

7423 Lee Davis Road • Mechanicsville, VA 23111 • Telephone (804) 559-9004 • Fax (804) 559-9306



ANALYTICAL LABORATORY REPORT

8-Jun-10

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Project:	Concord
Date Received:	5-May-10
Date Sampled:	5-May-10
Work Order No:	1005019-01
Client ID:	**Concord Process Water**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
Total Metals						
Selenium	<0.002	0.002	mg/L	EPA 200.2/3120B	1-Jun-10	HV
Dissolved Metals						
Antimony	<0.0014	0.0014	mg/L	EPA 200.2/3120B	1-Jun-10	HV
Arsenic	<0.001	0.001	mg/L	EPA 200.2/3120B	1-Jun-10	HV
Cadmium	<0.003	0.003	mg/L	EPA 200.2/3120B	1-Jun-10	HV
Chromium III	<0.0036	0.0036	mg/L	EPA 200.2/3120B	1-Jun-10	HV
Copper	<0.0005	0.0005	mg/L	EPA 200.2/3120B	1-Jun-10	HV
Lead	<0.0005	0.0005	mg/L	EPA 200.2/3120B	1-Jun-10	HV
Mercury	<0.0002	0.0002	mg/L	3112 B	28-May-10	HV
Nickel	<0.00094	0.00094	mg/L	EPA 200.2/3120B	1-Jun-10	HV
Silver	<0.0002	0.0002	mg/L	EPA 200.2/3120B	1-Jun-10	HV
Thallium	<0.002	0.002	mg/L	EPA 200.2/3120B	1-Jun-10	HV
Zinc	<0.0036	0.0036	mg/L	EPA 200.2/3120B	1-Jun-10	HV
Chromium VI	<0.0016	0.0016	mg/L	3500	5-May-10	NA

Primary Laboratories, Inc.
Results

8-Jun-10

Date Sampled: 5-May-10
Work Order No: 1005019-01
Client ID: **Concord Process Water**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
Hydrogen Sulfide	<0.05	0.05	mg/L	376.1	13-May-10	HV
Chlorine	0.07	0.01	mg/L	4500CL G	5-May-10	PB
Cyanide, Free	<0.010	0.010	mg/L	4500CN E	6-May-10	HV
Cyanide, Total	<0.010	0.010	mg/L	4500CN E	6-May-10	HV
Hardness	35.2	0.1	mg/L as $CaCo_3$	2340 C	12-May-10	NA
E Coli	1,299.7	1.0	MPN/100ml	9223 B	5-May-10	MS
Ammonia	0.02	0.01	mg/L	4500NH_3 F	10-May-10	NA

Date Sampled: 5-May-10
Work Order No: 1005029-01
Client ID: **Outfall 001**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
Uranium	0.00 +/- 0.00	0.67	pCi/L	200.8	19-May-10	SC**
Gross Alpha	1.3 +/- 1.3	2.1	pCi/L	7110 B	19-May-10	SC**
Gross Beta	46.3 +/- 1.7	1.1	pCi/L	7110 B	19-May-10	SC**
Combined Radium (226/228)	0.20 +/- 0.52	-	pCi/L	calculation	19-May-10	SC**
Tributyltin	<30	30	ng/L	GC/FPD	10-May-10	SC**
Pesticides						
Chlorpyrifos	<0.2	0.2	ug/L	EPA 622	11-May-10	SC**
Diazinon	<1	1	ug/L	EPA 622	11-May-10	SC**
Demeton	<1	1	ug/L	EPA 622	11-May-10	SC**
Guthion	<1	1	ug/L	EPA 622	11-May-10	SC**
Malathion	<1	1	ug/L	EPA 622	11-May-10	SC**
Parathion	<1	1	ug/L	EPA 622	11-May-10	SC**

** Analysis sub-contracted.

Primary Laboratories, Inc.
Results

8-Jun-10

Date Sampled: 5-May-10
Work Order No: 1005029-01
Client ID: **Outfall 001**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
Pesticides						
Aldrin	<0.05	0.05	ug/L	EPA 608	14-May-10	HV
Chlordane	<0.20	0.20	ug/L	EPA 608	14-May-10	HV
Dieldrin	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
4,4-DDT	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
4,4-DDE	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
4,4-DDD	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Endosulfan sulfate	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Endosulfan I	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Endosulfan II	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Endrin	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Alpha-BHC	<0.05	0.05	ug/L	EPA 608	14-May-10	HV
Beta-BHC	<0.05	0.05	ug/L	EPA 608	14-May-10	HV
Delta-BHC	<0.05	0.05	ug/L	EPA 608	14-May-10	HV
Gamma-BHC (Lindane)	<0.05	0.05	ug/L	EPA 608	14-May-10	HV
Heptachlor	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Kepone	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Methoxychlor	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Mirex	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Endrin Aldehyde	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
Heptachlor Epoxide	<0.10	0.10	ug/L	EPA 608	14-May-10	HV
PCB-1221	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
PCB-1232	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
PCB-1242	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
PCB-1016	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
PCB-1248	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
PCB-1254	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
PCB-1260	<1.0	1.0	ug/L	EPA 608	14-May-10	HV
Toxaphene	<5.0	5.0	ug/L	EPA 608	14-May-10	HV

Primary Laboratories, Inc.
Results

8-Jun-10

Units of Measure:	ug/L
Method Numbers*:	EPA 624
Date Analyzed:	6-May-10
Technician:	PB
Date Sampled:	5-May-10
Work Order No:	1005029-01
Client ID:	**Outfall 001**

Test Description	Final Result	Reporting Limit
Acrolein	<5.0	5.0
Acrylonitrile	<5.0	5.0
Benzene	<5.0	5.0
Bromoform	<5.0	5.0
Carbon tetrachloride	<5.0	5.0
Chlorobenzene	<5.0	5.0
Chlorodibromomethane	<5.0	5.0
Chloroform	<5.0	5.0
Dibromochloromethane	<5.0	5.0
1,2-Dichloroethane	<5.0	5.0
1,1-Dichloroethene	<5.0	5.0
trans-1,2-Dichloroethene	<5.0	5.0
1,2-Dichloropropane	<5.0	5.0
1,3-Dichloropropene	<5.0	5.0
Ethylbenzene	<5.0	5.0
Methylene Chloride	<5.0	5.0
Methyl Bromide	<5.0	5.0
1,1,2,2-Tetrachloroethane	<5.0	5.0
Tetrachloroethene	<5.0	5.0
Toluene	<5.0	5.0
1,1,2-Trichloroethane	<5.0	5.0
Trichloroethene	<5.0	5.0
Vinyl Chloride	<5.0	5.0
1,2-Dichlorobenzene	<5.0	5.0
1,3-Dichlorobenzene	<5.0	5.0
1,4-Dichlorobenzene	<5.0	5.0

Primary Laboratories, Inc.
Results

8-Jun-10

Method Numbers*:	EPA 625
Date Analyzed:	13-May-10
Technician:	HV
Units of Measure:	ug/L
Date Sampled:	5-May-10
Work Order No:	1005029-01
Client ID:	**Outfall 001**

Test Description	Final Result	Detection Limit
Acenaphthene	<10	10
Anthracene	<10	10
Benzidine	<10	10
Benzo(a) anthracene	<10	10
Benzo(b) fluoranthene	<10	10
Benzo(k) fluoranthene	<10	10
Benzo(a)pyrene	<10	10
bis-(2-Chloroethyl)ether	<10	10
bis-(2-Chloroisopropyl)ether	<10	10
Butyl benzyl phthalate	<10	10
2-Chloronaphthalene	<10	10
2-Chlorophenol	<10	10
Chrysene	<10	10
Dibenzo(a,h)anthracene	<10	10
Di-n-butyl phthalate	<10	10
3,3-Dichlorobenzidine	<10	10
2,4-Dichlorophenol	<10	10
Diethyl phthalate	<10	10
2,4-Dimethylphenol	<10	10
bis-2-Ethylhexyl Phthalate	<10	10
Dimethyl phthalate	<10	10
2,4-Dinitrophenol	<10	10
2,4-Dinitrotoluene	<10	10
1,2-Diphenylhydrazine	<10	10
Nonyl Phenol	<10	10
2-Methyl-4,6-Dinitrophenol	<10	10

Primary Laboratories, Inc.
Results

8-Jun-10

Method Numbers*:	EPA 625 (con't)
Date Analyzed:	13-May-10
Technician:	HV
Units of Measure:	ug/L
Date Sampled:	5-May-10
Work Order No:	1005029-01
Client ID:	**Outfall 001**

Test Description	Final Result	Detection Limit
Fluoranthene	<10	10
Fluorene	<10	10
Hexachlorobenzene	<10	10
Hexachlorobutadiene	<10	10
Hexachlorocyclopentadiene	<10	10
Hexachloroethane	<10	10
Indeno(1,2,3-cd) pyrene	<10	10
Isophorone	<10	10
Nitrobenzene	<10	10
N-Nitrosodimethylamine	<10	10
N-Nitrosodiphenylamine	<10	10
N-Nitrosodi-n-propylamine	<10	10
Pentachlorophenol	<10	10
Phenol	<10	10
Pyrene	<10	10
1,2,4-Trichlorobenzene	<10	10
2,4,6-Trichlorophenol	<10	10

* All methods are Standard Methods 18th Edition unless otherwise noted.

Signature: _____ Date: 6/8/10

Parry L. Bragg
Laboratory Manager

PRIMARY LABORATORIES CHAIN OF CUSTODY

Primary Laboratories
7423 Lee Davis Road
Mechanicsville, VA 23111
TEL: (804) 559-9004
FAX: (804) 559-9306

CLIENT: [illegible] CONSULTANT:

ATTN: [illegible] ATTN:

STREET: [illegible] STREET:

CITY: [illegible] CITY:

PHONE: [illegible] FAX: [illegible] PHONE: FAX:

PROJECT: [illegible]

PRESERVATIVE: Various

INVOICE TO:

P.O. #: 10-1324

SAMPLED BY: DKR

SAMPLE IDENTIFICATION	SAMPLING					MATRIX			Primary Lab No.	ANALYSES	COMMENTS
	COMPOSITE	GRAB	DATE	TIME	NO. OF CONTAINERS	WATER	SOIL	OTHER	(LAB USE ONLY)	Please see Attachment	
[illegible]		-	5/5/10		10	✓				✓	

RELINQUISHED BY SAMPLER: [illegible] DATE: 5/5/10 TIME: 11:30

RECEIVED BY: DATE: 5/5/10 TIME: 11:30

RELINQUISHED BY: [illegible] DATE: 5-5-10 TIME: 12:25

RECEIVED BY: [illegible] DATE: TIME:

RELINQUISHED BY: DATE: TIME:

RECEIVED BY LAB: Barton Base DATE: 5/5/10 TIME: 1225

TEMP: PRESERVATIVE

TAT:
- ○ 1 DAY / /
- ○ 2 DAYS / /
- ○ 3 DAYS / /
- ☒ 5 DAYS / /
- ○ 10 DAYS / /
- ○ OTHER / /

CHAIN OF CUSTODY #: 1 OF 1

Primary Laboratories, Inc.

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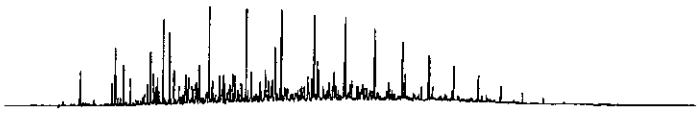

ANALYTICAL LABORATORY REPORT

13-Oct-06

Iluka Resources, Inc
Attn: Kevin Rideout
12472 St Johns Church Road
Stoney Creek, VA 23882

Date Received: 07-Sep-06
Date Sampled: 07-Sep-06
Work Order No: 0609057-01
Client ID: **#1 - #13**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Time Analyzed	Tech. Initials
Dissolved Metals							
Antimony	<0.100	0.100	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Arsenic	<0.050	0.050	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Cadmium	<0.010	0.010	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Copper	<0.020	0.020	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Lead	<0.050	0.050	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Mercury	<0.0002	0.0002	mg/L	245.1	13-Sep-06	14:47	AB
Nickel	<0.020	0.020	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Selenium	<0.050	0.050	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Silver	<0.020	0.020	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Thallium	0.002	0.002	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Zinc	<0.010	0.010	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Chromium III	<0.020	0.020	mg/L	200.2/200.7	27-Sep-06	16:40	HV
Chromium VI	<0.005	0.005	mg/L	218.4	08-Sep-06	08:00	NA
Cyanide	<0.010	0.010	mg/L	335.2	12-Sep-06	14:00	MS
Hydrogen Sulfide	<0.05	0.05	mg/L	376.1	27-Sep-06	16:45	PB
E. Coli	<2	2	MPN/100ml	9221C	08-Sep-06	16:00	MS
Ammonia	0.06	0.01	mg/L	350.3	12-Sep-06	08:00	NA
Chlorides	9.1	0.1	mg/L	325.3	11-Sep-06	11:00	NA
Chlorine, Total Residual	<0.010	0.010	mg/L	330.5	14-Sep-06	16:50	HV
Tributyltin	30	30	ng/L	GC/FID	14-Sep-06	16:58	SC*

Primary Laboratories, Inc.

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ANALYTICAL LABORATORY REPORT

7-May-08

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Date Received: 30-Apr-08
Date Sampled: 28-Apr-08
Work Order No: 0804240-01
Client ID: **Hickory Outfall 002**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
TSS	118.7	1.0	mg/L	2540 D	2-May-08 at 13:00	AS
METALS						
Copper	50	20	ug/L	EPA 200.2/3120B	7-May-08 at 13:32	HV

* All methods are Standard Methods 18th Edition unless otherwise noted.

Signature: _____ Date: 5/7/08

Patty L. Bragg
Laboratory Manager

Primary Laboratories, Inc.
Results

13-Oct-06

Date Sampled: 07-Sep-06
Work Order No: 0609057-01
Client ID: **#1 - #13**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Time Analyzed	Tech. Initials
Pesticides							
Aldrin	<0.05	0.05	ug/L	608	12-Sep-06	19:33	HV
Chlordane	<0.20	0.20	ug/L	608	12-Sep-06	19:33	HV
Dieldrin	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
4,4-DDT	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
4,4-DDE	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
4,4-DDD	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Endosulfan sulfate	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Endosulfan I	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Endosulfan II	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Endrin	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Gamma-BHC (Lindane	<0.50	0.50	ug/L	608	12-Sep-06	19:33	HV
Beta-BHC	<0.50	0.50	ug/L	608	12-Sep-06	19:33	HV
Alpha-BHC	<0.50	0.50	ug/L	608	12-Sep-06	19:33	HV
Heptachlor	<0.50	0.50	ug/L	608	12-Sep-06	19:33	HV
Kepone	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Methoxychlor	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Mirex	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Endrin Aldehyde	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Heptachlor Epoxide	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
PCB 1016	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
PCB 1221	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
PCB 1232	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
PCB 1242	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
PCB 1248	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
PCB 1254	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
PCB 1260	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
Toxaphene	<5.0	5.0	ug/L	608	12-Sep-06	19:33	HV

Date Sampled: 07-Sep-06
Work Order No: 0609057-01
Client ID: **#1 - #13**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Time Analyzed	Tech. Initials
Organophosphorus Pesticides							
Demeton	<1	1	ug/L	622	14-Sep-06	21:05	SC*
Malathion	<1	1	ug/L	622	14-Sep-06	21:05	SC*
Chlorpyrifos	<0.2	0.2	ug/L	622	14-Sep-06	21:05	SC*
Parathion	<1	1	ug/L	622	14-Sep-06	21:05	SC*
Guthion	<1	1	ug/L	622	14-Sep-06	21:05	SC*

Primary Laboratories, Inc.
Results

13-Oct-06

Test Method:	624
Date Analyzed:	08-Sep-06
Time Analyzed:	13:17
Technician:	PB
Date Sampled:	07-Sep-06
Units of Measure:	ug/L
Work Order No:	0609057-01
Client ID:	**#1 - #13**

Test Description	Final Result	Detection Limit
Acrolein	<5	5
Acrylonitrile	<5	5
Benzene	<5	5
Bromoform	<5	5
Carbon tetrachloride	<5	5
Chlorobenzene	<5	5
Chlorodibromomethane	<5	5
Chloroform	<5	5
Dichloromethane	<5	5
Dichlorobromomethane	<5	5
1,1-Dichloroethylene	<5	5
1,2-Dichloroethane	<5	5
1,2-trans-Dichloroethylene	<5	5
1,2-Dichloropropane	<5	5
1,3-Dichloropropene	<5	5
Ethylbenzene	<5	5
Methylene Bromide	<5	5
1,1,2,2-Tetrachloroethane	<5	5
Tetrachloroethylene	<5	5
Toluene	<5	5
Trichloroethylene	<5	5
1,1,2-Trichloroethane	<5	5
Vinyl Chloride	<5	5

Primary Laboratories, Inc.
Results

13-Oct-06

Test Method:	625
Date Analyzed:	12-Sep-06
Time Analyzed:	15:04
Technician:	HV
Date Sampled:	07-Sep-06
Units of Measure:	ug/L
Work Order No:	0609057-01
Client ID:	**#1 - #13**

Test Description	Final Result	Detection Limit
Acenaphthene	<10	10
Anthracene	<10	10
Benzidine	<10	10
Benzo(a) anthracene	<10	10
Benzo(b) fluoranthene	<10	10
Benzo(k) fluoranthene	<10	10
Benzo(a)pyrene	<10	10
bis-(2-Chloroethyl)ether	<10	10
bis-(2-Chloroisopropyl)ether	<10	10
Butyl benzyl phthalate	<10	10
2-Chloronaphthalene	<10	10
2-Chlorophenol	<10	10
Chrysene	<10	10
Dibenzo(a,h)anthracene	<10	20
Di-n-butyl phthalate	<10	10
1,2-Dichlorobenzene	<10	10
1,3-Dichlorobenzene	<10	10
1,4-Dichlorobenzene	<10	10
3,3-Dichlorobenzidine	<10	20
2,4-Dichlorophenol	<10	10
Diethyl phthalate	<10	10
2,4-Dimethylphenol	<10	10
Di-2-Ethylhexyl Phthalate	<10	10
Dimethyl phthalate	<10	10
2,4-Dinitrophenol	<10	10
2,4-Dinitrotoluene	<10	10
1,2-Diphenylhydrazine	<10	10

Primary Laboratories, Inc.
Results

13-Oct-06

Test Method:	625 (Con't)
Date Analyzed:	12-Sep-06
Time Analyzed:	15:04
Technician:	HV
Date Sampled:	07-Sep-06
Units of Measure:	ug/L
Work Order No:	0609057-01
Client ID:	**#1 - #13**

Test Description	Final Result	Detection Limit
Fluoranthene	<10	10
Fluorene	<10	10
Hexachlorobenzene	<10	10
Hexachlorobutadiene	<10	10
Hexachlorocyclopentadiene	<10	10
Hexachloroethane	<10	10
Indeno(1,2,3-cd) pyrene	<20	20
Isophorone	<10	10
2-Methyl-4,6-Dinitrophenol	<50	50
Nitrobenzene	<10	10
N-Nitrosodimethylamine	<10	10
N-Nitrosodiphenylamine	<10	10
N-Nitrosodi-n-propylamine	<10	10
Pentachlorophenol	<10	10
Phenol	<10	10
Pyrene	<10	10
1,2,4-Trichlorobenzene	<10	10
2,4,6-Trichlorophenol	<10	10

Date Sampled:	07-Sep-06
Work Order No:	0609057-01
Client ID:	**#1 - #13**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Time Analyzed	Tech. Initials
Gross Alpha	0.0±0.4	0.8	pci/l	900.0	25-Sep-06	08:00	SC*
Gross Beta	2.5±1.0	2.1	pci/l	900.0	25-Sep-06	08:00	SC*
Strontium-90	0.4±0.4	1.4	pci/l	905.0	03-Oct-06	11:00	SC*
Tritium	20.3±88.5	147.2	pci/l	906.0	06-Oct-06	-	SC*

Signature: _____ Date: 10/13/06

Parry L. Bragg
Laboratory Manager

Primary Laboratories, Inc.

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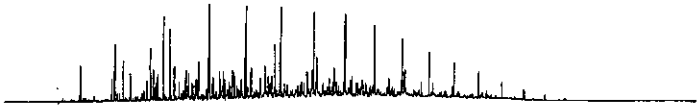

ANALYTICAL LABORATORY REPORT

22-Nov-06

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church
Stony Creek, Virginia 23882

Date Received: 17-Nov-06
Date Sampled: 11/16/2006 - 11/17/2006
Work Order No: 0611151-01
Client ID: **Concord Outfall 001 #3**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Ammonia	0.04	0.1	mg/L	350.3	22-Nov-06 at 8:00	NA

Date Sampled: 11/16/2006 - 11/17/2006
Work Order No: 0611151-02
Client ID: **Concord Outfall 001 #2**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Sulfide	0.20	0.05	mg/L	376.1	17-Nov-06 at 15:30	NA

Date Sampled: 11/16/2006 - 11/17/2006
Work Order No: 0611151-03
Client ID: **Concord Outfall 001 #1**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Chloride	8.1	0.1	mg/L	325.3	21-Nov-06 at 12:00	NA

Signature: _____ Date: 11-22-06
Parry L. Bragg
Laboratory Manager

PRIMARY LABORATORIES CHAIN OF CUSTODY

Primary Laboratories
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Mechanicsville, VA 23111
TEL: (804) 559-9004
FAX: (804) 559-9306

CLIENT: Iluka Resources Inc. CONSULTANT:
ATTN: Kevin Rideout ATTN:
STREET: 12472 St. John Church Rd. STREET:
CITY: Stony Creek, VA 23882 CITY:
PHONE: 434.348.4316 FAX: 434.246.3039 PHONE: FAX:

PROJECT: Criteria Monitoring
Concord PRESERVATIVE Outfall 1

INVOICE TO:

P.O.#: 06-78398

SAMPLED BY: JA/DKR

SAMPLE IDENTIFICATION	SAMPLING					MATRIX			Primary Lab No.	ANALYSES											COMMENTS
	COMPOSITE	GRAB	DATE	TIME	NO. OF CONTAINERS	WATER	SOIL	OTHER	(LAB USE ONLY)	Ammonia	Sulfide	Chloride									
Concord Outfall 001 #3	✓		11/16-17/06	24 HRS	1	✓			0611151-1	✓											
Concord Outfall 001 #2	✓		11/16-17/06	24 HRS	1	✓			-2		✓										
Concord Outfall 001 #1	✓		11/16-17/06	24 HRS	1	✓			-3			✓									

RELINQUISHED BY SAMPLER: Kevin Rideout DATE: 11/17/06 TIME: 0800
RECEIVED BY: DATE: 11/17/06 TIME: 0800

RELINQUISHED BY: DATE: TIME:
RECEIVED BY: DATE: TIME:

RELINQUISHED BY: DATE: 11/17/06 TIME: 1310
RECEIVED BY LAB: Debbie Stoneman DATE: 11/17/06 TIME: 1310

TEMP: On Ice
PRESERVATIVE

TAT:
m 24 HRS / /
m 48 HRS / /
m 72 HRS / /
X 5 DAYS 11 / 28
m 10 DAYS / /
m OTHER / /

CHAIN OF CUSTODY #: ___ OF ___

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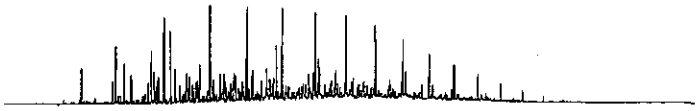

ANALYTICAL LABORATORY REPORT

05-Jun-06

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Date Received: 31-May-06
Date Sampled: 31-May-06
Work Order No: 0605196-01
Client ID: **Concord Sample 1**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
TSS	7.6	1.0	mg/L	160.2	1-Jun-06 at 14:00	MS

Signature: _____ Date: 6/5/06

Parry L. Bragg
Laboratory Manager

Primary Laboratories, Inc.

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ANALYTICAL LABORATORY REPORT

31-Aug-06

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church
Stony Creek, Virginia 23882

Project: Concord Outfall 001
Date Received: 24-Aug-06
Date Sampled: 24-Aug-06
Work Order No: 0608179-01
Client ID: **Concord Outfall 001**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
TSS	11.2	1.0	mg/L	160.2	29-Aug-06 at 16:00	MS

Signature: _____ Date: 8/31/06

Parry L. Bragg
Laboratory Manager

Primary Laboratories, Inc.

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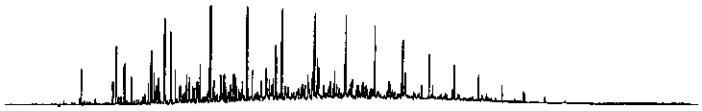

ANALYTICAL LABORATORY REPORT

13-Oct-06

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church
Stony Creek, Virginia 23882

Project: 4th Qtr Concord Outfall 001
Date Received: 10-Oct-06
Date Sampled: 09-Oct-06
Work Order No: 0610076-01
Client ID: **Concord Outfall 001**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
TSS	6.4	1.0	mg/L	160.2	12-Oct-06 at 15:00	MS

Signature: _____ Date: 10/13/06

Patty L. Bragg
Laboratory Manager

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LABORATORY ANALYSIS REPORT

Account:	2479-07-5	**Date/Time Collected:**	03/1/2007	
Client:	ILUKA Resources, Inc.	**Date/Time Received:**	03/1/2007	2:10 PM
Address:	12472 St. Johns Church Road	**Date Reported:**	03/7/2007	
	Stony Creek, VA 23882-8016	**Receipt Temp., °C:**		
Project Name:	Concord VPDES	**Sample Matrix:**	AQUEOUS	
Project No.:				
Job Location:	Concord Outfall 001			
P.O.#:	07-79375			

Sample Description: **Concord 001** **SLI Sample No.:** **29236556** **Client Sample No.:** **001**

Analyte	*Analysis Result*	*Quantitation Limit*	*Units*	*Dilution Factor*	*Analysis Date/Time*	*Analyst*
Total Suspended Solids by SM 2540D						
Total Suspended Solids	3900	1000	mg/L	1	03/7/2007 9:23:00 A	THN

Reviewed By: Bernard H. Howard, Supervisor

All samples for organics testing should be shipped in cool conditions, 1 to 6°C. Quality Control Data available upon request. *Data precision justifies 2 significant figures. Sample concentrations below the Quantitation Limit are noted as BQL (Below Quantitation Limit) or ND (None Detected) or with a "less than" (<) sign. Values designated with a "B" indicate presence of the analyte in the laboratory blank at a concentration above the Quantitation Limit. Surrogate Spike results designated with "D" indicate that the analyte was diluted out. "MI" indicates matrix interference. Soil results are reported on a dry weight basis. Results relate only to samples as received by the laboratory. Unusual sample conditions, if any, are described. All testing is done in strict accordance with SLI. protocol. Visit www.slabinc.com for current certifications.

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ANALYTICAL LABORATORY REPORT

01-Dec-06

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church
Stony Creek, Virginia 23882

Date Received: 28-Nov-06
Date Sampled: 27-Nov-06
Work Order No: 0611227-01
Client ID: **Outfall 001**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
TSS	10.8	1.0	mg/L	160.2	29-Nov-06 at 16:30	MS

Signature: _____ Date: 12-1-06

Parry L. Bragg
Laboratory Manager

Primary Laboratories, Inc.

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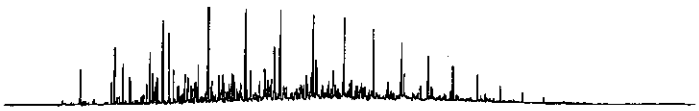

ANALYTICAL LABORATORY REPORT

4-May-07

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Date Received: 1-May-07
Date Sampled: 30-Apr-07
Work Order No: 0705001-01
Client ID: **Concord 001**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Time Analyzed	Tech. Initials
TSS	8.8	1.0	mg/L	160.2	2-May-07	09:30	AS

Signature: _____ Date: 5/4/07

Parry L. Bragg
Laboratory Manager

Primary Laboratories, Inc.

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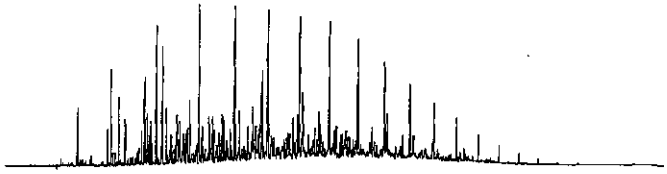

ANALYTICAL LABORATORY REPORT

8-Feb-08

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Date Received: 6-Feb-08
Date Sampled: 2-Feb-08
Work Order No: 0802036-01
Client ID: **Concord Outfall 001**

Test Description	Final Result	Reporting Limit	Units of Measure	Standard Methods (18)	Date Analyzed	Time Analyzed	Tech. Initials
TSS	<1.0	1.0	mg/L	2540 D	7-Feb-08	13:00	AS

Note: Sample received in laboratory on ice.

Signature: _____ Date: 2/8/08

Parry L. Bragg
Laboratory Manager

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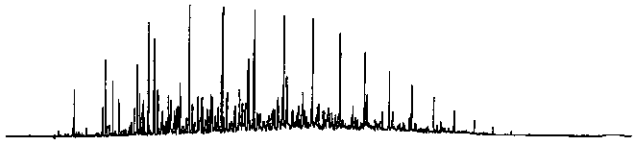

ANALYTICAL LABORATORY REPORT

5-May-08

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Date Received: 30-Apr-08
Date Sampled: 29-Apr-08
Work Order No: 0804242-01
Client ID: **Concord Outfall 001**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Time Analyzed	Tech. Initials
TSS	12.8	1.0	mg/L	2540 D	2-May-08	13:00	AS

* All methods are Standard Methods 18th Edition unless otherwise noted.

Signature: _____ Date: 5/5/08

Parry L. Bragg
Laboratory Manager

Primary Laboratories, Inc.

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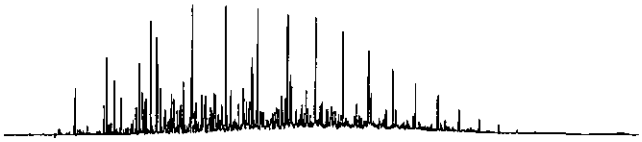

ANALYTICAL LABORATORY REPORT

28-Apr-08

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Project: Concord
Date Received: 22-Apr-08
Date Sampled: 21-Apr-08
Work Order No: 0804176-01
Client ID: **Outfall 001**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Time Analyzed	Tech. Initials
TSS	9.5	1.0	mg/L	2540 D	25-Apr-08	12:00	AS

* All methods are Standard Methods 18th Edition unless otherwise noted.

Signature: _____ Date: 4/28/08

Parry L. Bragg
Laboratory Manager

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LABORATORY ANALYSIS REPORT

Account:	2479-08-14	**Date/Time Collected:**	09/4/2008	
Client:	ILUKA Resources, Inc.	**Date/Time Received:**	09/4/2008	5:31 PM
Address:	12472 St. Johns Church Road	**Date Reported:**	09/9/2008	
	Stony Creek, VA 23882-8016	**Receipt Temp., °C:**		
Project Name:	Concord Outfall 001	**Sample Matrix:**	AQUEOUS	
Project No.:				
Job Location:	Concord			
P.O.#:	08-84261			

Sample Description:

SLI Sample No.: 29881414
Client Sample No.: 1

Analyte	Analysis Result	Quantitation Limit	Units	Dilution Factor	Analysis Date/Time	Analyst
Total Suspended Solids based on SM 2540D using SLI O11						
Total Suspended Solids	4	3	mg/L	1	09/9/2008 11:44:00 AM	THN

Reviewed By: Bernard H. Howard, Supervisor

All samples for organics testing should be shipped in cool conditions, 1 to 6°C. Quality Control Data available upon request. *Data precision justifies 2 significant figures. Sample concentrations below the Quantitation Limit are noted as BQL (Below Quantitation Limit) or ND (None Detected) or with a "less than" (<) sign. Values designated with a "B" indicate presence of the analyte in the laboratory blank at a concentration above the Quantitation Limit. Surrogate Spike results designated with "D" indicate that the analyte was diluted out. "MI" indicates matrix interference. Soil results are reported on a dry weight basis. Results relate only to samples as received by the laboratory. Unusual sample conditions, if any, are described. All testing is done in strict accordance with SLI. protocol. Visit www.slabinc.com for current certifications.

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LABORATORY ANALYSIS REPORT

Account:	2479-08-11	**Date/Time Collected:**	08/28/2008	
Client:	ILUKA Resources, Inc.	**Date/Time Received:**	08/29/2008	10:30 AM
Address:	12472 St. Johns Church Road	**Date Reported:**	09/4/2008	
	Stony Creek, VA 23882-8016	**Receipt Temp., °C:**	2	
Project Name:	Concord Outfall 001	**Sample Matrix:**	AQUEOUS	
Project No.:				
Job Location:	Concord			
P.O.#:	08-84261			

Sample Description:

SLI Sample No.: 29873830
Client Sample No.: 1

Analyte	Analysis Result	Quantitation Limit	Units	Dilution Factor	Analysis Date/Time	Analyst
Total Suspended Solids based on SM 2540D using SLI Q11						
Total Suspended Solids	BQL	3	mg/L	1	09/2/2008 12:30:00 PM	KD

Reviewed By: Bernard H. Howard, Supervisor

All samples for organics testing should be shipped in cool conditions, 1 to 6°C. Quality Control Data available upon request. *Data precision justifies 2 significant figures. Sample concentrations below the Quantitation Limit are noted as BQL (Below Quantitation Limit) or ND (None Detected) or with a "less than" (<) sign. Values designated with a "B" indicate presence of the analyte in the laboratory blank at a concentration above the Quantitation Limit. Surrogate Spike results designated with "D" indicate that the analyte was diluted out. "MI" indicates matrix interference. Soil results are reported on a dry weight basis. Results relate only to samples as received by the laboratory. Unusual sample conditions, if any, are described. All testing is done in strict accordance with SLI. protocol. Visit www.slabinc.com for current certifications.

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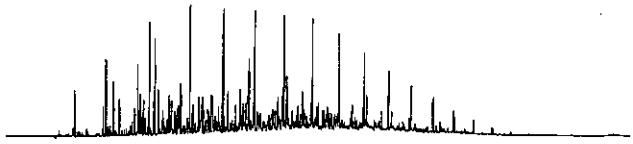

ANALYTICAL LABORATORY REPORT

16-Jul-08

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Date Received: 10-Jul-08
Date Sampled: 9-Jul-08
Work Order No: 0807060-01
Client ID: **Concord Outfall 001**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Time Analyzed	Tech. Initials
TSS	7.9	1.0	mg/L	2540 D	15-Jul-08	13:45	AS

* All methods are Standard Methods 18th Edition unless otherwise noted.

Signature: _____ Date: 7/16/08

Parry L. Bragg
Laboratory Manager

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LABORATORY ANALYSIS REPORT

Account:	2479-08-30	**Date/Time Collected:**	12/13/2008	
Client:	ILUKA Resources, Inc.	**Date/Time Received:**	12/16/2008	8:20 AM
Address:	12472 St. Johns Church Road	**Date Reported:**	12/17/2008	
	Stony Creek, VA 23882-8016	**Receipt Temp., °C:**		
Project Name:	Concord Outfall 001	**Sample Matrix:**	AQUEOUS	
Project No.:				
Job Location:	Concord			
P.O.#:	08-84261			

Sample Description:

SLI Sample No.: 30007076

Client Sample No.: Concord 001

Analyte	Analysis Result	Quantitation Limit	Units	Dilution Factor	Analysis Date/Time	Analyst
Total Suspended Solids based on SM 2540D using SLI 011						
Total Suspended Solids	16	5	mg/L	1	12/17/2008 3:20:00 PM	KD

Reviewed By: Andrew P. Sulak, Organics Mgr.

All samples for organics testing should be shipped in cool conditions, 1 to 6°C. Quality Control Data available upon request. *Data precision justifies 2 significant figures. Sample concentrations below the Quantitation Limit are noted as BQL (Below Quantitation Limit) or ND (None Detected) or with a "less than" (<) sign. Values designated with a "B" indicate presence of the analyte in the laboratory blank at a concentration above the Quantitation Limit. Surrogate Spike results designated with "D" indicate that the analyte was diluted out. "MI" indicates matrix interference. Soil results are reported on a dry weight basis. Results relate only to samples as received by the laboratory. Unusual sample conditions, if any, are described. All testing is done in strict accordance with SLI. protocol. Visit www.slabinc.com for current certifications.

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LABORATORY ANALYSIS REPORT

Account:	2479-08-17	**Date/Time Collected:**	10/14/2008	
Client:	ILUKA Resources, Inc.	**Date/Time Received:**	10/15/2008	5:00 PM
Address:	12472 St. Johns Church Road	**Date Reported:**	10/21/2008	
	Stony Creek, VA 23882-8016	**Receipt Temp., °C:**		
Project Name:	Concord Outfall 001	**Sample Matrix:**	AQUEOUS	
Project No.:				
Job Location:				
P.O.#:	08-84261			

Sample Description:

SLI Sample No.: 29929980

Client Sample No.: Outfall 001

Analyte	Analysis Result	Quantitation Limit	Units	Dilution Factor	Analysis Date/Time	Analyst
Total Suspended Solids based on SM 2540D using SLI Q11						
Total Suspended Solids	BQL	3	mg/L	1	10/21/2008 9:20:00 AM	KD

Reviewed By: Andrew P. Sulak, Organics Mgr.

All samples for organics testing should be shipped in cool conditions, 1 to 6°C. Quality Control Data available upon request. *Data precision justifies 2 significant figures. Sample concentrations below the Quantitation Limit are noted as BQL (Below Quantitation Limit) or ND (None Detected) or with a "less than" (<) sign. Values designated with a "B" indicate presence of the analyte in the laboratory blank at a concentration above the Quantitation Limit. Surrogate Spike results designated with "D" indicate that the analyte was diluted out. "MI" indicates matrix interference. Soil results are reported on a dry weight basis. Results relate only to samples as received by the laboratory. Unusual sample conditions, if any, are described. All testing is done in strict accordance with SLI. protocol. Visit www.slabinc.com for current certifications.

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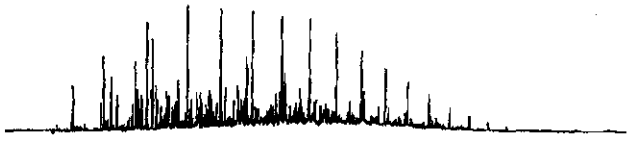

ANALYTICAL LABORATORY REPORT

16-Jul-08

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Date Received: 10-Jul-08
Date Sampled: 9-Jul-08
Work Order No: 0807060-01
Client ID: **Concord Outfall 001**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Time Analyzed	Tech. Initials
TSS	7.9	1.0	mg/L	2540 D	15-Jul-08	13:45	AS

* All methods are Standard Methods 18th Edition unless otherwise noted.

Signature: _____ Date: 7/16/08

Perry L. Bragg
Laboratory Manager

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Certificate of Analysis

Final Report

Laboratory Order ID 09020157

Client Name: Iluka Resources, Inc.
12472 St. John Church Road
Stony Creek, VA 23832

Date Received: February 11, 2009
Date Issued: February 16, 2009

Submitted To: Kevin Rideout

Project Number: NA

Client Site I.D.: Concord

Purchase Order 09-88650

Sample I.D.: Concord Outfall 001

Laboratory Sample I.D.: 09020157-001

Date/Time Sampled: 02/10/09

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
TSS	SM18/2540D	26.2 mg/L	1.0	02/12/09 15:42	WBP

Ted Soyars

Laboratory Manager

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Certificate of Analysis

Final Report

Laboratory Order ID 09060454

Client Name: Iluka Resources, Inc.
12472 St. John Church Road
Stony Creek, VA 23832

Date Received: June 24, 2009
Date Issued: June 26, 2009

Submitted To: Kevin Rideout

Project Number: NA

Client Site I.D.: Concord

Purchase Order 09-88650

Sample I.D.: Concord 001

Laboratory Sample I.D.: 09060454-001

Date/Time Sampled: 06/24/09 09:30

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
TSS	SM18/2540D	10.7 mg/L	1.0	06/25/09 15:00	WBP

Ted Soyars
Laboratory Manager

Primary Laboratories, Inc.

7423 Lee Davis Road • Mechanicsville, VA 23111 • Telephone (804) 559-9004 • Fax (804) 559-9306

ANALYTICAL LABORATORY REPORT

15-Dec-09

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Date Received: 10-Dec-09
Date Sampled: 9-Dec-09
Work Order No: 912103
Client ID: **Concord Outfall 001**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Time Analyzed	Tech. Initials
TSS	7.9	1.0	mg/L	2540 D	14-Dec-09	14:30	AS

* All methods are Standard Methods 18th Edition unless otherwise noted.

Signature: _____ Date: 12/14/09

Parry L. Bragg
Laboratory Manager

Primary Laboratories, Inc.

7423 Lee Davis Road • Mechanicsville, VA 23111 • Telephone (804) 559-9004 • Fax (804) 559-9306

ANALYTICAL LABORATORY REPORT

23-Nov-09

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Project: Concord 001
Date Received: 16-Nov-09
Date Sampled: 12-Nov-09
Work Order No: 0911160-01
Client ID: **Concord 001**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Time Analyzed	Tech. Initials
TSS	4.1	1.0	mg/L	2540 D	19-Nov-09	8:00	AS

* All methods are Standard Methods 18th Edition unless otherwise noted.

Signature: _____ Date: 11/23/09

Patty L. Bragg
Laboratory Manager

Primary Laboratories, Inc.

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ANALYTICAL LABORATORY REPORT

13-Oct-09

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Project: Concord
Date Received: 7-Oct-09
Date Sampled: 4-Oct-09
Work Order No: 0910061-01
Client ID: **Outfall 001**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Time Analyzed	Tech. Initials
TSS	12.8	1.0	mg/L	2540 D	10-Oct-09	12:30	AS

* All methods are Standard Methods 18th Edition unless otherwise noted.

Signature: _____ Date: 10/13/09

Parry L. Bragg
Laboratory Manager

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Certificate of Analysis

Final Report

Laboratory Order ID 09020157

Client Name: Iluka Resources, Inc.
12472 St. John Church Road
Stony Creek, VA 23832

Date Received: February 11, 2009
Date Issued: February 16, 2009

Submitted To: Kevin Rideout

Project Number: NA

Client Site I.D.: Concord

Purchase Order 09-88650

Sample I.D.: Concord Outfall 001

Laboratory Sample I.D.: 09020157-001

Date/Time Sampled: 02/10/09

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
TSS	SM18/2540D	26.2 mg/L	1.0	02/12/09 15:42	WBP

Ted Soyars

Laboratory Manager

AIR WATER & SOIL LABORATORIES, INC.®
2109A North Hamilton Street • Richmond, Virginia 23230 • Tel: (804) 358-8295 Fax: (804) 358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 10010393

Client Name: Iluka Resources, Inc.
12472 St. John Church Road
Stony Creek, VA 23832

Date Received: January 25, 2010
Date Issued: January 27, 2010

Submitted To: Kevin Rideout

Project Number: NA

Client Site I.D.: Concord

Purchase Order 10-92202

Sample I.D.: Concord Outfall 001

Laboratory Sample I.D.: 10010393-001

Date/Time Sampled: 01/25/10 11:00

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
TSS	SM18/2540D	23.8 mg/L	1.0	01/26/10 16:21	LMT

Ted Soyars

Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a dry weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.